# Section 1. Registration Information

## Source Identification

| | |
|---|---|
| Facility Name: | Cholla Water Treatment Plant |
| Parent Company #1 Name: | City of Glendale Utilities Department |
| Parent Company #2 Name: | |

## Submission and Acceptance

| | |
|---|---|
| Submission Type: | Re-submission |
| Subsequent RMP Submission Reason: | 5-year update (40 CFR 68.190(b)(1)) |
| Description: | |
| Receipt Date: | 29-Jun-2009 |
| Postmark Date: | 29-Jun-2009 |
| Next Due Date: | 29-Jun-2014 |
| Completeness Check Date: | 29-Jun-2009 |
| Complete RMP: | Yes |
| De-Registration / Closed Reason: | |
| De-Registration / Closed Reason Other Text: | |
| De-Registered / Closed Date: | |
| De-Registered / Closed Effective Date: | |
| Certification Received: | Yes |

## Facility Identification

| | |
|---|---|
| EPA Facility Identifier: | 1000 0009 3891 |
| Other EPA Systems Facility ID: | |

## Dun and Bradstreet Numbers (DUNS)

| | |
|---|---|
| Facility DUNS: | 77523579 |
| Parent Company #1 DUNS: | |
| Parent Company #2 DUNS: | |

## Facility Location Address

| | |
|---|---|
| Street 1: | 4805 West Cholla Street |
| Street 2: | |
| City: | Glendale |
| State: | ARIZONA |
| ZIP: | 85304 |
| ZIP4: | |
| County: | MARICOPA |

## Facility Latitude and Longitude

| | |
|---|---|
| Latitude (decimal): | 33.590000 |
| Longitude (decimal): | -112.165278 |
| Lat/Long Method: | GPS - Unspecified |
| Lat/Long Description: | Center of Facility |
| Horizontal Accuracy Measure: | 10 |
| Horizontal Reference Datum Name: | World Geodetic System of 1984 |
| Source Map Scale Number: | |

## Owner or Operator

| | |
|---|---|
| Operator Name: | City of Glendale Utilities Dept. |
| Operator Phone: | (623) 930-3900 |

## Mailing Address

| | |
|---|---|
| Operator Street 1: | 4805 West Cholla Street |
| Operator Street 2: | |
| Operator City: | Glendale |
| Operator State: | ARIZONA |
| Operator ZIP: | 85304 |
| Operator ZIP4: | |
| Operator Foreign State or Province: | |
| Operator Foreign ZIP: | |
| Operator Foreign Country: | |

## Name and title of person or position responsible for Part 68 (RMP) Implementation

| | |
|---|---|
| RMP Name of Person: | Rick Scott |
| RMP Title of Person or Position: | Superintendent of Plant Operations |
| RMP E-mail Address: | rscott@glendaleaz.com |

## Emergency Contact

| | |
|---|---|
| Emergency Contact Name: | Todd Hellman |
| Emergency Contact Title: | Plant Operations Supervisor |
| Emergency Contact Phone: | (623) 930-3932 |
| Emergency Contact 24-Hour Phone: | (623) 640-1113 |
| Emergency Contact Ext. or PIN: | |
| Emergency Contact E-mail Address: | thellman@glendaleaz.com |

## Other Points of Contact

| | |
|---|---|
| Facility or Parent Company E-mail Address: | |
| Facility Public Contact Phone: | (623) 930-3903 |
| Facility or Parent Company WWW Homepage Address: | www.glendaleaz.com |

## Local Emergency Planning Committee

| | |
|---|---|
| LEPC: | Maricopa County LEPC |

## Full Time Equivalent Employees

| | |
|---|---|
| Number of Full Time Employees (FTE) on Site: | 28 |
| FTE Claimed as CBI: | |

## Covered By

| | |
|---|---|
| OSHA PSM : | Yes |
| EPCRA 302 : | |
| CAA Title V: | |
| Air Operating Permit ID: | |

## OSHA Ranking

OSHA Star or Merit Ranking:

## Last Safety Inspection

| | |
|---|---|
| Last Safety Inspection (By an External Agency) Date: | 26-Mar-2009 |
| Last Safety Inspection Performed By an External Agency: | Fire Department |

## Predictive Filing

Did this RMP involve predictive filing?:

## Preparer Information

Preparer Name:
Preparer Phone:
Preparer Street 1:
Preparer Street 2:
Preparer City:
Preparer State:
Preparer ZIP:
Preparer ZIP4:
Preparer Foreign State:
Preparer Foreign Country:
Preparer Foreign ZIP:

## Confidential Business Information (CBI)

CBI Claimed:
Substantiation Provided:
Unsanitized RMP Provided:

## Reportable Accidents

| | |
|---|---|
| Reportable Accidents: | See Section 6. Accident History below to determine if there were any accidents reported for this RMP. |

## Process Chemicals

| | |
|---|---|
| Process ID: | 1000010889 |
| Description: | Chlorine |
| Process Chemical ID: | 1000012407 |
| Program Level: | Program Level 3 process |
| Chemical Name: | Chlorine |
| CAS Number: | 7782-50-5 |
| Quantity (lbs): | 24000 |
| CBI Claimed: | |
| Flammable/Toxic: | Toxic |

## Process NAICS

| | |
|---|---|
| Process ID: | 1000010889 |
| Process NAICS ID: | 1000011269 |
| Program Level: | Program Level 3 process |
| NAICS Code: | 22131 |
| NAICS Description: | Water Supply and Irrigation Systems |

# Section 2. Toxics: Worst Case

## Toxic Worst ID: 1000009191

| | |
|---|---|
| Percent Weight: | |
| Physical State: | Gas liquified by pressure |
| Model Used: | EPA's RMP*Comp(TM) |
| Release Duration (mins): | 10 |
| Wind Speed (m/sec): | 1.5 |
| Atmospheric Stability Class: | F |
| Topography: | Urban |

### Passive Mitigation Considered

| | |
|---|---|
| Dikes: | |
| Enclosures: | Yes |
| Berms: | |
| Drains: | |
| Sumps: | |
| Other Type: | |

# Section 3. Toxics: Alternative Release

## Toxic Alter ID: 1000010085

| | |
|---|---|
| Percent Weight: | |
| Physical State: | Gas liquified by pressure |
| Model Used: | EPA's RMP*Comp(TM) |
| Wind Speed (m/sec): | 1.5 |
| Atmospheric Stability Class: | A |
| Topography: | Urban |

### Passive Mitigation Considered

| | |
|---|---|
| Dikes: | |
| Enclosures: | Yes |
| Berms: | |
| Drains: | |
| Sumps: | |
| Other Type: | |

### Active Mitigation Considered

| | |
|---|---|
| Sprinkler System: | |
| Deluge System: | |
| Water Curtain: | |
| Neutralization: | |
| Excess Flow Valve: | |
| Flares: | |
| Scrubbers: | |
| Emergency Shutdown: | |
| Other Type: | |

# Section 4. Flammables: Worst Case

No records found.

# Section 5. Flammables: Alternative Release

No records found.

# Section 6. Accident History

No records found.

# Section 7. Program Level 3

## Description

No description available.

## Program Level 3 Prevention Program Chemicals

| | |
|---|---|
| Prevention Program Chemical ID: | 1000010303 |
| Chemical Name: | Chlorine |
| Flammable/Toxic: | Toxic |
| CAS Number: | 7782-50-5 |
| Prevention Program Level 3 ID: | 1000008883 |
| NAICS Code: | 22131 |

## Safety Information

| | |
|---|---|
| Safety Review Date (The date on which the safety information was last reviewed or revised): | 13-May-2009 |

## Process Hazard Analysis (PHA)

| | |
|---|---|
| PHA Completion Date (Date of last PHA or PHA update): | 13-May-2009 |

## The Technique Used

| | |
|---|---|
| What If: | Yes |
| Checklist: | |
| What If/Checklist: | |
| HAZOP: | |
| Failure Mode and Effects Analysis: | |
| Fault Tree Analysis: | |
| Other Technique Used: | |
| PHA Change Completion Date (The expected or actual date of completion of all changes resulting from last PHA or PHA update): | 31-Aug-2009 |

## Major Hazards Identified

| | |
|---|---|
| Toxic Release: | Yes |
| Fire: | Yes |
| Explosion: | |
| Runaway Reaction: | |
| Polymerization: | |
| Overpressurization: | |
| Corrosion: | |
| Overfilling: | |
| Contamination: | |
| Equipment Failure: | Yes |
| Loss of Cooling, Heating, Electricity, Instrument Air: | |
| Earthquake: | |
| Floods (Flood Plain): | |

| | |
|---|---|
| Tornado: | |
| Hurricanes: | |
| Other Major Hazard Identified: | |

## Process Controls in Use

| | |
|---|---|
| Vents: | |
| Relief Valves: | |
| Check Valves: | Yes |
| Scrubbers: | Yes |
| Flares: | |
| Manual Shutoffs: | Yes |
| Automatic Shutoffs: | |
| Interlocks: | |
| Alarms and Procedures: | Yes |
| Keyed Bypass: | |
| Emergency Air Supply: | |
| Emergency Power: | Yes |
| Backup Pump: | |
| Grounding Equipment: | |
| Inhibitor Addition: | |
| Rupture Disks: | |
| Excess Flow Device: | |
| Quench System: | |
| Purge System: | |
| None: | |
| Other Process Control in Use: | |

## Mitigation Systems in Use

| | |
|---|---|
| Sprinkler System: | |
| Dikes: | |
| Fire Walls: | |
| Blast Walls: | |
| Deluge System: | |
| Water Curtain: | |
| Enclosure: | Yes |
| Neutralization: | |
| None: | |
| Other Mitigation System in Use: | |

## Monitoring/Detection Systems in Use

| | |
|---|---|
| Process Area Detectors: | Yes |
| Perimeter Monitors: | Yes |
| None: | |
| Other Monitoring/Detection System in Use: | |

## Changes Since Last PHA Update

| | |
|---|---|
| Reduction in Chemical Inventory: | |
| Increase in Chemical Inventory: | |
| Change Process Parameters: | |
| Installation of Process Controls: | Yes |
| Installation of Process Detection Systems: | |

| | |
|---|---|
| Installation of Perimeter Monitoring Systems: | |
| Installation of Mitigation Systems: | |
| None Recommended: | |
| None: | |
| Other Changes Since Last PHA or PHA Update: | |

## Review of Operating Procedures

| | |
|---|---|
| Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures): | 13-May-2009 |

## Training

| | |
|---|---|
| Training Revision Date (The date of the most recent review or revision of training programs): | 13-May-2009 |

## The Type of Training Provided

| | |
|---|---|
| Classroom: | Yes |
| On the Job: | Yes |
| Other Training: | |

## The Type of Competency Testing Used

| | |
|---|---|
| Written Tests: | Yes |
| Oral Tests: | |
| Demonstration: | Yes |
| Observation: | Yes |
| Other Type of Competency Testing Used: | |

## Maintenance

| | |
|---|---|
| Maintenance Procedures Revision Date (The date of the most recent review or revision of maintenance procedures): | 13-May-2009 |
| Equipment Inspection Date (The date of the most recent equipment inspection or test): | 03-Jun-2009 |
| Equipment Tested (Equipment most recently inspected or tested): | chlorine monitoring equipment |

## Management of Change

| | |
|---|---|
| Change Management Date (The date of the most recent change that triggered management of change procedures): | 01-Feb-2003 |
| Change Management Revision Date (The date of the most recent review or revision of management of change procedures): | 01-Feb-2003 |

## Pre-Startup Review

| | |
|---|---|
| Pre-Startup Review Date (The date of the most recent pre-startup review): | 01-Feb-2003 |

## Compliance Audits

| | |
|---|---|
| Compliance Audit Date (The date of the most recent compliance audit): | 25-Jun-2009 |
| Compliance Audit Change Completion Date (Expected or actual date of completion of all changes resulting from the compliance audit): | 25-Aug-2009 |

## Incident Investigation

| | |
|---|---|
| Incident Investigation Date (The date of the most recent incident investigation (if any)): | 18-Jun-2003 |
| Incident Investigation Change Date (The expected or actual date of completion of all changes resulting from the investigation): | 30-Jun-2003 |

## Employee Participation Plans

| | |
|---|---|
| Participation Plan Revision Date (The date of the most recent review or revision of employee participation plans): | 13-May-2009 |

## Hot Work Permit Procedures

| | |
|---|---|
| Hot Work permit Review Date (The date of the most recent review or revision of hot work permit procedures): | 13-May-2009 |

## Contractor Safety Procedures

| | |
|---|---|
| Contractor Safety Procedures Review Date (The date of the most recent review or revision of contractor safety procedures): | 13-May-2009 |
| Contractor Safety Performance Evaluation Date (The date of the most recent review or revision of contractor safety performance): | 13-May-2009 |

## Confidential Business Information

| | |
|---|---|
| CBI Claimed: | |

# Section 8. Program Level 2

# Section 9. Emergency Response

## Written Emergency Response (ER) Plan

| | |
|---|---|
| Community Plan (Is facility included in written community emergency response plan?): | Yes |
| Facility Plan (Does facility have its own written emergency response plan?): | Yes |
| Response Actions (Does ER plan include specific actions to be taken in response to accidental releases of regulated substance(s)?): | Yes |
| Public Information (Does ER plan include procedures for informing the public and local agencies responding to accidental release?): | Yes |
| Healthcare (Does facility's ER plan include information on emergency health care?): | Yes |

## Emergency Response Review

| | |
|---|---|
| Review Date (Date of most recent review or update of facility's ER plan): | 13-May-2009 |

## Emergency Response Training

| | |
|---|---|
| Training Date (Date of most recent review or update of facility's employees): | 15-Oct-2008 |

## Local Agency

| | |
|---|---|
| Agency Name (Name of local agency with which the facility ER plan or response activities are coordinated): | City of Glendale Fire Dept. |
| Agency Phone Number (Phone number of local agency with which the facility ER plan or response activities are coordinated): | (623) 930-3400 |

## Subject to

| | |
|---|---|
| OSHA Regulations at 29 CFR 1910.38: | Yes |
| OSHA Regulations at 29 CFR 1910.120: | Yes |
| Clean Water Regulations at 40 CFR 112: | Yes |
| RCRA Regulations at CFR 264, 265, and 279.52: | |
| OPA 90 Regulations at 40 CFR 112, 33 CFR 154, 49 CFR 194, or 30 CFR 254: | |
| State EPCRA Rules or Laws: | Yes |
| Other (Specify): | |

# Executive Summary

Executive Summary

This document is an update to the Cholla Water Treatment Plant (CWTP) Risk Management Program (RMP) that was submitted to U.S. EPA in May 1999 and March 2005. In accordance with RMP guidance documents and regulations, all administrative and operational changes at the facility since 1999 are documented.

In June 1996, the U.S. Environmental Protection Agency (EPA) issued Risk Management (RM) program regulations (40 CFR, Part 68). Regulated under the Clean Air Act Amendments (CAAA), Section 112(r), the RMPRMP requires facilities that store large amounts of listed hazardous chemical substances to prepare and implement risk management plans to reduce the probability of accidental releases and minimize the health risks to the public and the environment.

The RMP regulates 77 listed toxic substances and 63 listed flammable substances. Of the 140 toxic and flammable chemicals regulated by the RMP, the CWTP has only one such listed chemical (anhydrous chlorine) that is used to disinfect drinking water provided to the residents of Glendale. The terms anhydrous chlorine and chlorine are used interchangeably and specifically refer to a chemical listed in the RMP regulations. When used as a disinfectant, chlorine prevents the spread of waterborne diseases and has been used for years in the water treatment industry. When properly used, chlorine has proven to be both safe and effective.

In addition to the CWTP, the RMP regulations apply to an estimated 7,200 public and private drinking water and wastewater treatment facilities nationwide where chlorine and/or ammonia are used as disinfectants. As with other facilities across the U.S., the City of Glendale views the RMP as a vehicle to communicate emergency response procedures to the public and emergency planning agencies.

Minimizing Risk

The major driving force in the development of the RMP regulations is reducing the risk to public health by minimizing the potential of a chemical release. At CWTP, there is a multi-layer system in place to meet this goal. As part of the RMP, operators are trained in dealing with the day-to-day handling of chlorine. Chlorine detectors are located in areas where chlorine is stored and/or used and provide a warning in the event of a release. Trained personnel respond to chlorine alarms to assess whether a chlorine release poses an imminent danger to employees or the public. While safety features such as a low pressure chlorine delivery system make a significant release unlikely, in the event that a release does occur, response plans have been developed. The emergency response plans include assistance from outside agencies, as well as operators trained to take appropriate action such as contacting the Glendale Fire Department (GFD). The GFDÂ¿s emergency response time is 5 minutes or less.

Management Plan

Within the management and administrative roles of the CWTP, responsibility has been defined to coordinate and implement the RMP. Overall development and management of the RMP is the responsibility of the RMP Manager. The RMP Coordinator reports to the RMP Manager and is responsible for coordinating the implementation of the RMP. The CWTP Safety Administrator is responsible for the overall record keeping of the RMP and reports to the RMP Coordinator. The Chief Plant Operator is responsible for the day-to-day implementation of the RMP and reports to the RMP Manager. Additional program oversight is provided by the City of GlendaleÂ¿s Environmental Resources Administrator and Employee Safety Manager who act as external auditors of the programÂ¿s implementation and overall quality.

For the CWTP, the following personnel have been assigned to coordinate and implement the RMP:

Â¿ The Superintendent of Plant Operations is the designated RMP Manager
Â¿ The Safety & Security Coordinator is the designated RMP Coordinator

The Safety & Security Coordinator is also the delegated coordinator for the Occupational Safety and Health Administration (OSHA) Process Safety Management (PSM) program in place at CWTP. The requirements of the PSM program largely parallel RMP requirements. Because of the similarities in the two programs, the RMP Coordinator will be referred to as the RM/PSM Program Coordinator throughout this document.

Worst Case and Alternate Case Release Scenarios

CWTP modeled three potential release events for chlorine and followed EPA guidance to identify a worst case release scenario (WCS) and alternate case release scenarios (ACS) as defined by the EPA regulations. Toxic endpoints were identified using EPA-approved methods.

A Â¿worst case scenarioÂ¿ is defined by the EPA as the result of a release from the largest container and/or pipe over a span of 10 minutes. The distance to a toxic endpoint is defined by emergency response planning guidelines level 2 (ERPG-2) as a concentration a person can be exposed to for up to 1 hour without experiencing serious health effects. The distance to a toxic endpoint is used to determine the affected geographical area and population for emergency planning purposes. The ERPG-2 value for chlorine is 3 parts per million by volume (ppmv).

EPA states that a WCS is useful for encouraging Â¿community dialogueÂ¿. However, because the WCS does not necessarily represent events likely to occur, it is more useful for discussion purposes than for emergency planning purposes. An Â¿alternative release scenarioÂ¿ is a release scenario more likely than the WCS and can be used for emergency response planning.

The WCS for the CWTP is a release of 2,000 pounds of chlorine in 10 minutes. The distance to the toxic endpoint for the WCS is 1.33 miles, affecting approximately 5.6 square miles and an estimated population of 34,719.

The ACS is based on an operator opening the chlorine container valve before connecting the flexible piping (pigtail) resulting in a release of gaseous chlorine. This ACS resulted in an endpoint distance of 0.53 miles. A population of approximately 5,497 could potentially be affected if this scenario were to occur.

5-Year Accident History
In the past 5 years, the there has not been a chemical release at the CWTP resulting in off-site property damage or health consequences requiring medical treatment.

Chemical Release Prevention Program
The CWTP has a chemical release prevention program in place for the chlorine process. This program is required by both the RMP and OSHA PSM regulations. The prevention program for the chlorine process has been in place since 1995. Key provisions of the CWTP prevention program are as follows:

Â¿ Written procedures have been prepared for the covered process, including directions for safe start-up and shutdown, operations and emergency shutdown.

Â¿ CWTP employees who operate the chlorine system must receive training initially and periodically on safe start-up/shutdown, operations, and emergency shutdown.

Â¿ Incidences, including minor releases are investigated to improve the safety of the process.

Â¿ Once completed, incident investigations are shared with employees.

Â¿ Employees participate in a process hazard analysis (PHA) which identifies potential hazards and ways to improve the safety of the process every five years, or when significant changes are made to the process.

Â¿ The CWTP has a management of change (MOC) program in place that mandates changes to the chlorine system are reviewed prior to the change to ensure that the change will not compromise safety.

Â¿ An equipment design and maintenance program is in place that assures mechanical integrity. Equipment design and maintenance practices are consistent with guidance provided by the Chlorine Safety Institute.

Â¿ A preliminary start-up review is also completed prior to returning the covered equipment to service after a major change or prior to a new covered process coming on-line.

Â¿ A hot work permit program is in place.

Â¿ Contractors who work on or near the RMP process are advised of the hazards of chlorine, provided evacuation instructions in case an incident occurs, and must certify that they are qualified to work near hazardous materials.

Emergency Response Program

The CWTP has an emergency response program in place for the chlorine process. This program consists of personnel trained to recognize releases, assess the situation, and engage the proper emergency response personnel. When external emergency response is required, plant personnel will notify the GFD then establish an incident command system that is transferred to the GFD upon their arrival. Once GFD establishes command, they are supported by CWTP personnel familiar with the affected process. The GFD has access to additional emergency response resources, including the City of Glendale Police Department, Red Cross, Arizona Department of Environmental Quality, and other agencies, as needed.

Improvements Since Last Report Submission

The CWTP installed a vacuum system starting at the chlorine ton container to limit potential risk of a chlorine release to the surrounding environment. This system eliminates piping with pressurized chlorine gas. Any leak beyond this point will be minimized due to vacuum on the lines instead of pressure in the piping system.